THE WESTERN RAILROADER

Northern California Railroad Club's
North of Market Excursion

Over the Market Street Railway
September 24, 1939

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Sunday, September 24, 1939

Excursionists:

We who are cooperating to give you this trip today extend our hardiest welcome to you, and trust that you will enjoy your trip as much as we have enjoyed preparing it. We have spared no effort to make this trip as enjoyable and as interesting as it is humanly possible to do so, and we will feel that our efforts have been well spent if you will bear with us.

This trip has been carefully planned in advance and the trip is expected to run along at a rate not to slow, but with plenty of time to see and photograph everything. Your cooperation is asked however in the matter of returning to the car promptly when the signal is given that we are ready to continue. We will have many types of equipment spotted for photo taking and non-photographers are asked not to linger in front of the cars spotted for pictures.

So much for the request, now for the surprises; no, we are not telling you them, but preparing you for them. Don't be surprised at anything you see for the Market Street Railway has lots of equipment, and many of the unusual shots are to be had only on an excursion of this kind. Let us take this ride in the same spirit of adventure that prompted Cabrillo to sail into the harbor of San Francisco those many years ago. All will be revealed as we enter the portals of the car barns and routes of the Market Street Railway.

May you have a good, enjoyable and interesting time, photographically and otherwise. This is your trip, we are your servants.

The Northern California Railroad Club
The Market Street Railway

THE WESTERN RAILROADER
"For the Western Railfan"
118 Mt. Diablo Avenue, San Mateo, California

OUT OF THE PAST

Contributed by Walt Sievers

San Francisco's history of street railroads begins in the year of 1857 when the State Legislature granted to Thomas Hayes and associates a franchise to lay down and maintain an iron railroad along Market and Valencia streets from the junction of Market and California to Mission Dolores, using horses or mules as motive power. So the "San Francisco Market Street Railroad Company" came into being. Nothing much was done about the whole affair until May 1859 when the work of grading the three miles of line was started in earnest. With great pomp and amid much blowing of whistles a trial trip was run over the line on July 4th, 1860. Horsepower proved inadequate, so an awkward steam dummy locomotive was constructed by Vulcan Iron Works of San Francisco for the street railroad. This steam dummy was a combination passenger car and locomotive: the front end was steam engine and the rear end in the form of a long box on wheels was the passenger compartment. The engine itself was not housed in as on later street locomotives. As there was no turntable on either end of the line this contraption had to back up one trip for the entire distance of three miles and was continually off the track. Later this dummy was transferred to the Central Pacific Railroad and served as Governor Stanford's private train, finally ending up on the line of the Sierra Nevada Wood & Lumber Company between Truckee and Hobart Mills.

As the company had started to operate steam trains without franchise, it hastened to rectify this by making application for one to the State Legislature which was granted in 1861 for a period of five years but gave the Board of Supervisors the right to prohibit the use of steam on Market Street after that time.

Soon after acquiring the new franchise the use of the passenger car-locomotive-combination was curtailed and detachable locomotives, which were completely housed in what looked more like a car than a steam engine, were put in service pulling one or two flat-roofed cars behind them. A railing was fastened around the edges of the roof and longitudinal seats provided along the midle so that on warm days passengers could climb on top of the roof and do some sightseeing. Market Street, at this time, was not the great thoroughfare it is today. It was not even a graded street. The railway passed through many narrow cuts in the sand hills and by ponds of stagnant water. Yerba Buena Cemetery was located where the Civic Center now is;

and one old-time reporter states that the real estate along upper Market Street was very much in the form of movable property—when the wind blew very hard from the west, the real estate moved east, and vice versa.

A branch line was built into Hayes Valley where an amusement park was located. This, too, was operated with steam power. But, during 1866, the Board of Supervisors passed an ordinance forbidding the use of steam engines on Market Street. This law went into effect one year after it was passed and the last steam train was run on March 5, 1867. Horse cars were used after that date until 1883 when the line was reconstructed into a cable railroad.

The first cable railroad was constructed on Clay Street. During the decade of 1860 to 1870 the business section of the city was located on Kearny, Montgomery and Sansome streets. Between it and the then suburban Western Addition lay a range of steep hills—called in an old report "a high, precipitous ridge" —whose foremost peaks are Nob Hill and Russian Hill. Speedier transportation between the two sections was needed, but horse railroads had trouble negotiating the hills. A tunnel through the ridge was proposed. A franchise for its construction was granted by the State Legislature in 1862, but nothing came of the project as no capital could be made available. Too, it did not seem to fulfill all requirements as the elevated portions of the district would still have been without transportation. On account of the fine views the summits along this ridge had become a favorite dwelling place. A horse railroad was tried up Clay Street at one time; five horses were hitched onto a single light-weight car. It proved to be hard work to get the car to the top when it was loaded. Also the danger of the brakes slipping on the downward trip was enough to frighten even the most courageous of the passengers.

During the year of 1867, A. S. Hallidie had perfected a method of transporting freight over canyons and mountains by means of an endless wire rope. This invention became known as the "Hallidie ropeway". It may that from this Benjamin H. Brooks got his idea of laying the endless wire cable under the surface of the street so it would not interfere with other traffic, and have it operated by a stationary steam engine, with passenger cars traveling along it length. English coal mines had employed cables to draw cars for some time, but they were hung on the end of it. Here, now, was a problem of making cars loaded with passengers travel along an underground cable, get them to stop to take on or let off passengers and to start up again. More than a year of hard work was spent in planning, draughting and experimenting. In this he had the help of W. H. Hepburn, a very skillful civil engineer. After the scheme was fully thought and the plans prepared, it was presented to the Board of Supervisors and a fran-

chise asked for.

Mayor of San Francisco at this time was Thomas H. Selby. He hesitated for a long time about granting the franchise and investigated the matter thoroughly as to safety of operation and the workability of the plan. After a great many men—prominent in the field of engineering in the City—had assured him that it would be safe and could be done he finally gave his approval and the franchise was granted in 1869. But now came another difficulty: to induce the moneyed men to invest in the scheme. In these years the capitalists of San Francisco did not deem it safe to invest in industrial enterprises. Gambling in mining stocks was preferred. No local capital for the construction of his cable road could be found, so Brooks invited eastern capitalist to come to San Francisco and investigate. This they did —took one long look at the steep hills and the few pedestrians on the street and departed: saying it would never pay, consoling the inventor by admiring the neatness of his plans. Brooks struggled on with his plans for a few years trying to raise money, but finally tired of it and, in 1872, sold his plans and franchise to A. S. Hallidie for a nominal consideration.

Hallidie had, during 1871, also perfected an underground, endless moving cable system with which to pull loaded streetcars up the hills of San Francisco and also invented a gripping device to be attached to the underside of the car. When he presented the idea to the public it was ridiculed. After he bought the franchise and plans from Brooks, he further perfected the plans and also went about the business of raising funds. Books were opened for subscriptions, but not a share of stock could be sold. Property owners along Clay Street who hoped to benefit by a transportation system up to the top of the hill subscribed to a subsidy to get things started, and Hallidie through his own perseverance and that of a few true friends finally was able to scrape enough money together to start construction. So the Clay Street Hill Cable Railroad Company was formed. It was not an amibtious affair. To demonstrate the fesibility of the plan to the public and to capital and to use this road as an experiment was the main object. The cost of building it from Kearny to Jones—six short blocks—had been $68,000. Its starting point was at Clay and Kearny streets and it ran up Clay to Jones Street.

On August 1, 1873, at five o'clock in the morning several men—engineers and workmen of the new road—stood on top of Clay Street listening to the noise of the cable. It was the first time the steam plant had been put in operation and was winding the cable up one track and down the other. The lift was 307 feet in three-quarters of a mile. A few hours later the first car was hauled up the hill and let down to Kearny Street. A great many people had assembled along the route to watch

proceedings. Before the car started its second trip up the hill they loudly cheered the engineers who were riding on it and also pelted the car with flowers. On August 2, 1873, the road was thrown open to general traffic, and shortly afterward extended for one block to Leavenworth Street which remained the terminus of the cable part of the railroad for several years.

An old account of this railroad reads like this: "At the top of the grade stands a stationary engine of 35 horse-power. This operates heavy machinery, which steadily winds the wire up one track and down the other. This cable-rope is of the best steel wire, upward of three inches in circumference, about one and three-eigth mile long, and weighs nearly 5 tons. The cars receive the motive power through tenders or dummies, coupled to them in front and provided with strong gripping clamps or grippers which reach down through a narrow, continuous slit or slot nearly under the center of the car, and firmly grip the cable which instantly communicates its motion to both tender and car. They stop by releasing their grip upon the running cable beneath and emain stationary, or avoid running down hill by four strong brakes which instead or acting directly upon the wheels as usual, present four long, flat surfaces which when pushed squarely down upon the track exert a friction which proves amply sufficient to hold them securely in place without the least sign of slipping even under the heaviest load. Judging by the throngs of spectators and passengers for months after opening of this road, it was for a long time an open question whether it was the greater, mechanical curiosity or municipal convenience. . . . When the car reaches the top of the hill, the dummy peceding it is removed, and the car continues to the end of the line with horses attached . . . Among minor conveniences of this line, the public notices with pleasure, that it was the first and, thus far, remains the only one, which provide its cars with clocks, and keeps them, like the other equipment of the line, always in excellent running order and sharply 'on time'."

It proved a success not only mechanically, but what was more important, also financially. During 1874, it had 10 cars, 33 employees, and 22 horses. Between September 1873 and August 1875, the road carried nearly 2,000,000 passengers at five cents each. In 1875, its daily travel averaged 4,000 people. During the year of 1876 the road transported 1,900,000 passengers and had a gross income of $85,000. Only the old-time Chinaman was afraid of the cable cars; "no pushee, no pullee, but allee samee go", he said and shook his head.

The second railroad to adopt the cable traction was the Sutter Street Railroad Company. This line had become famous through introduction of a new type one-horse car: the "Balloon Car". This type of car had a noval outline and a dome top, but the main novelty was that its body

turned at will upon the truck which remained stationary, thus not only enabling the company to dispense with turntables at the end of the line, but also relieving the driver from the necessity of unhitching his horses, driving them around, and reattaching them to the other end of the car But during 1877, on account of the many steep grades along its routes, the company decided, to change over to cable traction along part of its system The cable was used along Sutter from Market to Polk, then along Polk to Bush, and along the latter street to Cemetery Avenue and also on a branch along Larkin Street to Market Street. From the Ferry—the first Ferry Depot at the foot of Market Street came into operation during 1874—to junction of Sutter and Market Streets along Market horse cars were used as well as on the other branch lines.

As mentioned before, the cable was introduced on Market Street during 1883. The roadbed was constructed first class; so good it withstood the great earthquake of 1906. But, the Market Street Railroad did not want to waste a lot of money in buying new equipment. So a new type of cable car came into existence, combining the trailer and the dummy. The horse car rolling stock was simply converted into cable car through addition of several feet to their length to make a place for the grip and the gripman. Added seating capacity was also furnished by providing longitudinal seats in this added section on which the passengers sat facing outward. These composite cars weighed about 9,000 pounds and carried a single grip on one end and had wheel brakes on each of the two trucks. In 1893, the Market Street Railroad brought out a single-end car of this combination type—half open, half closed—with some improvement. These used double trucks, 22-inch wheels, one pair of track brakes and wheel brakes: the forward wheel brake being operated by a footlever by the gripman, the lever by the conductor. Of course, these cars could only be used with turntables and loops, but were the standard type of cable car of the Market Street Railroad after that date and later of the United Railroads up to the time of the fire. Some are still in use on the Mason and Powell street lines. The first ones weighed about 11,000 pounds and cost $2,000 a-piece.

On December 31, 1882, all streetcar traffic came to a complete standstill. San Francisco was unexpectedly visited by a first-class snow-storm leaving several inches on the ground. The younger generation went to work with a vengeance. After driving every silk hat and stovepipe lid into hiding they could find no finer targets for their snowballs than the horse cars. By noon they had every horse car in the city on the run, and most of them had all windows broken. The railroad companies sent out extra teams and men to get their equipment into the barns in a hurry. Streetcar traffic disappeared for the rest of

the day.

Electric traction was introduced into San Francisco by the San Francisco and San Mateo Railroad which was built during 1891 by Mr. Behrend Joost and ran from the corner of Steuart and Market to the county line via Steuart, Harrison, 14th, Guerrero and San Jose Avenue. It did not pay expenses and failed after a short time, but was later refinanced. Their cars were modeled after the California type cable cars: with an open section at each end having longitudinal seats facing outward. These cars were 26 and 28 feet long; the shorter ones being single truck, the longer ones double, with two 25-horse-power motors. Track and wheel brakes were installed at first, but the latter were finally discarded.

Cable cars were kept in operation along Market Street until the great fire of April 1906. In order to get the street car traffic back into operation in a hurry afer the disaster, permission was given the United Railroads to make the change to electric traction with overhead trolley. Electric cars using underground electric conduit could have been put in before this time, but the railroad company did not believe it practical especially after the disasterous failure of the underground electric conducts in San Jose. San Francisco did not want trolley poles and overhead wires to spoil the beauty of Market Street. The traction company had long before tried to persaude the people to give it permission to change from cable to electric power, but to no avail. They would not even listen to the great proposal the Market Street Railroad once advocated: it suggested to erect trolley poles of an ornamental design, surmounted by arc lamps, in the middle of the thoroughfare, so as to be an ornament rather than an eyesore.

After electric traction finally was adopted after the fire for most of the lines, the bodies of the old horse and cable cars were dumped in the sanddunes near the beach just south of Golden Gate Park. An old sea dog with a love for the salt air and a view of the ocean hauled one of these cars up a sand hill near the ocean overlooking the broad Pacific and called it home. Others followed with other cars, till the village of Carville grew up on the white dunes, "looking as though a gigantic box of toys had been spilled and scattered there." It became a town of some 2,000 people with its own stores, restaurants, hotel and churches. Some were little one-car cabins, fronted with decks and trimmed with shells or whalebone or flotsam; some were two-story houses with one car perched on top of the other, and reached by an outside stairway. There is still some evidence of Carville left to this day; if one looks very hard, one can still make out several streetcar homes, but a great many residences have been so much "improved" till the only evidence that remained of the original coach is a long row of trim, little windows somewhere in the structure.

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Third and Townsend Depot

It is perhaps significant that the trip today should start at the Third and Townsend depot of the Southern Pacific for it is the gateway to San Mateo County which is celebrating its 15th Fiesta today. The San Francisco station was not always at this spot for in 1863 when the San Francisco and San Jose Railroad first began operations the terminal was located at Eighteenth and Valencia Streets.

Ownership of the San Francisco and San Jose line was acquired by the Southern Pacific in 1868, and since that time the history of the service has been constant improvement. The first depot under the Southern Pacific was located on Brannan Street between Third and Fourth, but it was again moved about two years later to Market and Valencia. The depot at Market and Valencia was not the end of the line however for occasionally the trains would be run down Market Street as far as the Palace Hotel. That is until the city fathers passed a law against this procedure.

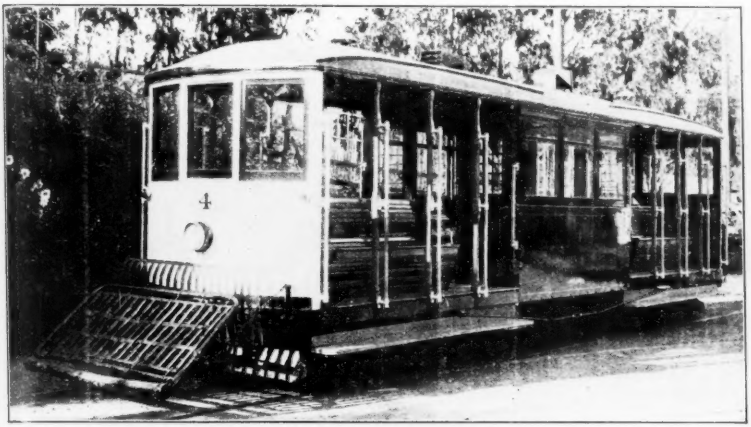
In 1875 the station was again moved to a spot near the present terminal on Townsend Street between Third and Fourth. This depot was a wooden structure, and part still can be seen to the south of the present depot. The present terminal was completed in 1914 at a cost of $245,000 to handle an ever increasing commuter traffic.

Peninsula commuters today ride over 10 of the most expensive miles of railroad ever built—the Bayshore cut-off between San Francisco and San Bruno, completed in 1907 at a cost of close to a million dollars per mile The new line replaced the old line built in 1863 over the San Bruno hills through Colma, shortened the distance by over two and a half miles, and reduced the grade from 158 feet to 16 feet per mile.

In 1924 the facilities at Third and Townsend were further improved by an investment of $404,000 in paving and new tracks, and in the same year the Southern Pacific purchased 70 new steel interurban coaches for the Peninsula line at a cost of $1,732,540. Built by the Pullman company, they were especially well designed to meet the local requirements, even to the extent of making allowances for possible conversion to electric operation.

At present an average of some 7500 commuters travel daily on the Peninsula suburban lines of the Southern Pacific, the number steadily increasing as indicated by a figure of 5400 in 1930.

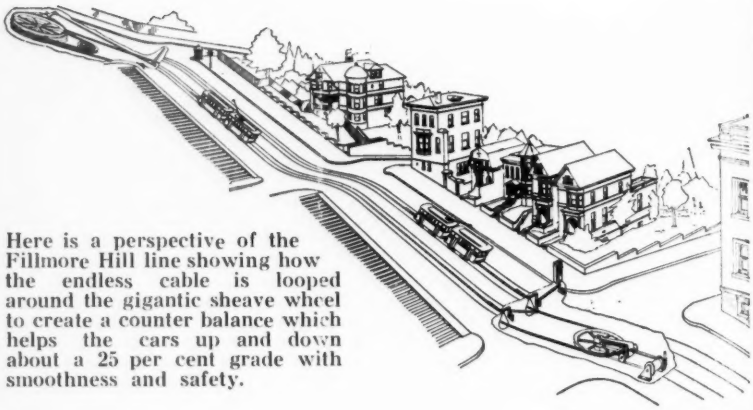
Commutation rates per mile on the Peninsula trains today are among the lowest per mile of all comparable commuter services in the entire country.



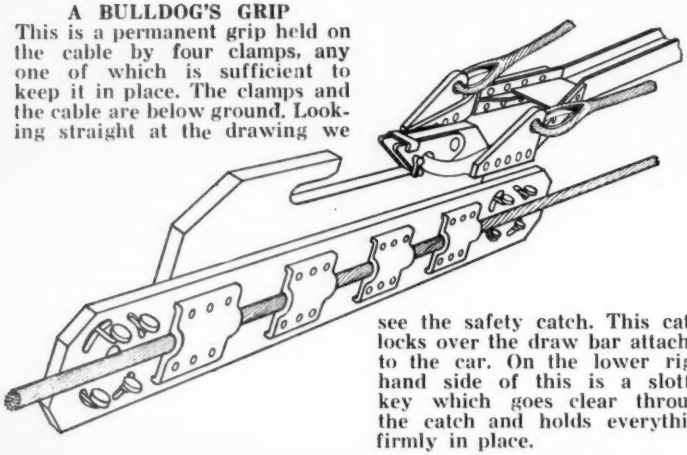
Market Street Railway No. 4, standard gauge cable car used on the Castro Cable line, the only standard gauge all-cable line on the system. Cars 1 to 7 are used on the line though only four are needed for the rush hours. The Castro Cable line originally ran all the way to the Ferry Building, and the power house was located at Market and Valencia. After the earthquake and fire in 1906 however, that part of the line between 18th and Castro and the Ferry Building was electrified and the power house for the remaining cable section was removed to its present site.

FILLMORE HILL — (see back page)

The Fillmore Hill line is unique in transit fields as being both a cable and an electric line, as well as having been the only multipule unit street car line in San Francisco up to this time. The line is explained so far as the cable section goes by the illustrations, but few are acquainted with the electric operations of the line. During the 1915 Exposition the Fillmore hill line was one of the most direct routes to the fair, and did an unusual amount of business. So much in fact that the cars were operated in two car trains with jumpers for M.U. operation. This practice was discontinued after the fair closed.



Here is a perspective of the Fillmore Hill line showing how the endless cable is looped around the gigantic sheave wheel to create a counter balance which helps the cars up and down about a 25 per cent grade with smoothness and safety.

A BULLDOG'S GRIP

This is a permanent grip held on the cable by four clamps, any one of which is sufficient to keep it in place. The clamps and the cable are below ground. Looking straight at the drawing we see the safety catch. This catch locks over the draw bar attached to the car. On the lower right hand side of this is a slotted key which goes clear through the catch and holds everything firmly in place.